AASHTO T 11 - MATERIALS FINER THAN NO. 200 (75 µm) SIEVE IN MINERAL AGGREGATES BY WASHING

Conduct this procedure according to AASHTO T 11, NDDOT Modified.

The standard test procedure reports the percentage of material finer than the No. 200 sieve to the nearest 0.1% except if the result is 10% or more, report to the nearest whole number. NDDOT modification is the accuracy is reported to the same significant digit as the specification for the class of aggregate.

Consult the current edition of AASHTO for procedure in its entirety and equipment specification details.

SCOPE

This test method determines the amount of material finer than the No. 200 sieve in aggregate by washing. Procedure A shall be used unless otherwise specified.

When accurate determinations of material finer than the No. 200 in fine or coarse aggregate are desired, this test method is used on the aggregate sample prior to dry sieving according to T 27. The results of this procedure are included in the calculations for T 27.

REFERENCED DOCUMENTS

AASHTO T 2, Sampling Aggregates
AASHTO T 27, Sieve Analysis of Fine and Coarse Aggregate
AASHTO T 248, Reducing Samples of Aggregate to Testing Size
AASHTO T 255, Total Evaporable Moisture Content of Aggregate by Drying

APPARATUS

Balance
Sieves: No. 16 and No. 200
Sample splitter
Oven
Washing container
Spoon

TEST SPECIMEN

Obtain sample according to T 2. Thoroughly mix and reduce according to T 248.

Test specimen shall be a representative sample based on the following table.

Nominal Maximum Size	Minimum Mass
No. 4 (4.75 mm) or smaller	300 g
3/8" (9.5 mm)	1000 g
3/4" (19.0 mm)	2500 g
1½" (37.5 mm)	5000 g

The sample size required for this test is a minimum after drying.

PROCEDURE

Record all information on SFN 9987 or 2455. Weights are recorded to the nearest 0.1 g.

Oven dry the sample according to T 255 at a temperature of 230 ± 9°F (110 ± 5°C). Weigh and record as original weight of sample.

Place the sample into the washing container and add sufficient water to cover. Stir and agitate the sample with the spoon until all fines are in suspension.

Slowly decant the water into the stacked No. 16 and 200 sieves being careful not to lose the coarser material of the sample.

Add a second charge of water to the sample in the washing container and stir, agitate, and decant. Repeat this process until the wash water is clear.

Wash any remaining material on the sieve back into the sample. Do not decant any water from the container except through a No. 200 sieve to avoid loss of material. Any remaining water should be evaporated by the drying procedure.

Oven dry the sample according to T 255 at a temperature of 230 ± 9°F (110 ± 5°C). Weigh and record as weight after wash.

CALCULATIONS

If this test has been ran for the purpose of accurate determination of material finer than the No. 200 in fine or coarse aggregate, the results of this procedure are determined by the calculations for T 27 on SFN 9987.

To calculate material passing the No. 200 sieve as percent of the total sample for coarse aggregate for concrete, subtract dry weight after washing from weight of total sample

and divide result by weight of total sample. Multiply this result by 100 and record as material passing No. 200 sieve as percent of total sample. The equation is as follows:

$$A = [(B-C)/B] \times 100$$

A = percent of material finer than No. 200 sieve by washing
B = weight of total sample before washing
C = weight of dry sample after washing

REPORT

Report the percent of material finer than the No. 200 sieve to the same significant digit as the specification for the class of aggregate.

NOTES

A piece of rubber tubing may be attached to a water faucet and be used to rinse material from the sieves. The velocity of the water, which may be increased by pinching the tubing, should not be sufficient to cause splashing of the sample over the sides of the sieve.

CALIBRATION

A calibration check of the equipment should be performed annually as a minimum, or whenever damage or repair occurs.